

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7713

Petition of Kane's Cow Power, LLC ("KCP") for a)
certificate of public good, pursuant to 30 V.S.A. § 248(j),)
authorizing the installation and operation of a 225-kW)
agricultural-methane electrical generating facility at the)
Kane Scenic River Farm, located at 5893 Route 105 in)
Sheldon, Vermont)

Order entered: 5/12/2011

I. INTRODUCTION

This docket involves a petition filed by Kane's Cow Power, LLC ("KCP"), requesting a certificate of public good ("CPG") under 30 V.S.A. § 248(j) for the installation and operation of a 225-kW agricultural-methane electrical generating facility at the Kane Scenic River Farm, located at 5893 Route 105 in Sheldon, Vermont (the "Project"). In today's Order, we conclude that the Project will be of limited size and scope; the petition does not raise a significant issue with respect to the substantive criteria of 30 V.S.A. § 248; the public interest is satisfied by the procedures authorized by 30 V.S.A. § 248(j); and the Project will promote the general good of the state.

II. PROCEDURAL HISTORY

On January 27, 2011, KCP filed a petition with the Public Service Board ("Board") pursuant to 30 V.S.A. § 248(j) for a CPG authorizing the installation and operation of a 225-kW agricultural-methane electrical generating facility at the Kane Scenic River Farm, located at 5893 Route 105 in Sheldon, Vermont. KCP submitted prefiled testimony, proposed findings, and a proposed order pursuant to the requirements of 30 V.S.A. § 248(j).

On January 28, 2011, Central Vermont Public Service Corporation ("CVPS") filed a motion to intervene in this Docket.

Notice of the filing in this Docket was sent on February 17, 2011, to all parties specified in 30 V.S.A. § 248(a)(4)(C) and all other interested persons. The notice stated that any party wishing to submit comments as to whether the petition raises a significant issue with respect to the substantive criteria of 30 V.S.A. § 248 must file comments with the Board on or before March 17, 2011.

On February 17, 2011, the Board requested additional information concerning the petition and on February 24, 2011, KCP filed the requested information.

On March 17, 2011, the Vermont Department of Public Service ("Department") filed a letter stating that the petition does not raise any significant issues with respect to the substantive criteria of 30 V.S.A. § 248. Also, on March 17, 2011, the Department filed a determination that the proposed project is consistent with the *Vermont Electric Plan*, in accordance with 30 V.S.A. § 202(f).

On March 17, 2011, the Agency of Natural Resources ("ANR") filed comments regarding KCP's proposed use of off-farm feedstock in the digester. On March 28, 2011, ANR filed additional comments regarding KCP's proposed use of off-farm feedstock in the digester.

On March 28, 2011, CVPS filed supplemental testimony and exhibits. On March 29, 2011, CVPS filed corrected supplemental testimony and a corrected exhibit.

On April 12, 2011, KCP filed a letter regarding its use of off-farm feedstock and its interconnection with CVPS.

On April 15, 2011, CVPS filed a letter providing additional information about the components necessary to interconnect the Project to the CVPS electric system.

No other comments were received.

The Board has reviewed the petition and accompanying documents and agrees that, pursuant to 30 V.S.A. § 248(j), a CPG should be issued without the notice and hearings otherwise required by 30 V.S.A. § 248.

III. MOTION TO INTERVENE

On January 28, 2011, CVPS filed a motion to intervene in this Docket. No comments were received regarding CVPS's intervention request.

CVPS is the interconnecting utility for the proposed project and has a substantial interest in assuring that the interconnection and operation of the proposed project does not adversely impact the safety, power quality, reliability, and stability of the CVPS electric system. Therefore, we grant CVPS permissive intervention pursuant to Board Rule 2.209(B), limited to the interests identified in its motion.

IV. FINDINGS

1. KCP is a Vermont limited liability company whose members are Nancy Kane, Tom Kane, Aaron Kane, and Ashley Kane. Nancy, Tom, and Aaron are also members of Kane's Scenic River Farm, LLC, which owns and operates a large dairy farm at 5893 Route 105 in Sheldon, Vermont (the "Farm"). Petition at 1.

2. KCP proposes to construct and operate an electrical generating facility on the Farm. The Project will use methane gas derived by processing raw manure and other feedstock in a digester located on the Farm. The generator will produce up to 225 kW of electricity. Kane pf. at 1-4; exh. H.

3. The Project is intended to be a Sustainably Priced Energy Enterprise Development ("SPEED") resource so that it may qualify to sell power at the standard-offer price pursuant to 30 V.S.A. § 8005(b)(2).¹ The Project has an executed standard-offer contract. The Project's environmental attributes (renewable energy credits), distinct from the electrical output, will be sold separately. Kane pf. at 4-5.

4. The Project will include:

(a) construction of an enclosed, concrete manure digester (approximately ninety feet long, seventy-five feet wide, and sixteen feet high with all but a few feet above-grade); and

(b) conversion of an existing concrete silage bunker to a powerhouse/separator building, which will retain the existing foot print of 70 feet by 125 feet.

1. For more information about the SPEED or standard-offer program visit the VermontSPEED website at <http://vermontspeed.com/standard-offer-program/> or the Board's Implementation of Standard Offer Prices for SPEED website page at <http://psb.vermont.gov/docketsandprojects/electric/7523>.

To interconnect the Project with the distribution system, CVPS will install

(a) on-farm distribution-system upgrades including

- (i) upgrading 400 feet of an existing single-phase tap, which currently feeds the existing farm buildings, to three-phase crossarm construction; and
- (ii) constructing two three-phase spans to connect the upgraded tap to the generator, which will involve the installation of three power poles on Line 91: Pole 31-3, a fifty-foot pole with an above-ground height of forty-three feet, which will hold a pole-mounted transformer; Pole 31-4, a sixty-foot pole with an above-ground height of fifty-two feet, which will hold two radio antennas and a recloser; and Pole 31-5PT, a fifty-foot pole with an above-ground height of forty-three feet, which will hold three 167 kVa customer-owned transformers; and

(b) off-farm distribution-system upgrades including

- (i) installing a new mid-span sixty-foot pole with an above-ground height of fifty-two feet (Pole 7X), which will hold one recloser and three radio antennas;
- (ii) replacing one forty-five foot pole with a sixty-foot pole (Line 1 Pole 4), which will hold one radio antenna and a distribution transformer, and one forty-foot pole with a fifty-five-foot pole (Line 91 Pole 31); and
- (iii) installing communications equipment needed for the operation of protective devices including the six radio antennas detailed above and approximately 1,500 feet of fiberoptic cable on an existing three-phase distribution line on Route 105, originating at the Sheldon substation breaker and ending at Line 1 Pole 4.

Kane pf. at 2; letter of February 24, 2011, from Ebenezer Punderson, Esq., on behalf of KCP, to Susan Hudson, Clerk of the Board; Upton pf. at 3-4; Upton supp. pf. at 1-2; exhs. C, D, E, and H and CVPS-TOU-1-5; letter of April 19, 2011, from Morris Silver, Esq., on behalf of CVPS, to Susan Hudson, Clerk of the Board.

5. The Project is designed to be consistent in appearance with existing Farm structures and will be constructed entirely on the Farm property, within the existing farmstead complex, and near other large farm buildings. Kane pf. at 3.

6. The distribution upgrades associated with the Project will be constructed within the farmstead complex and along CVPS's existing three-phase distribution line. Upton pf. at 2-7; Upton supp. pf. at 1-3.

7. The digester is designed to process various types of methane-producing feedstock including manure and other agricultural substrates. The feedstock will be pumped from a reception pit into the digester, where it will be mixed and heated. The naturally resulting decomposition will produce methane gas and biosolids. The methane will be collected and used to fuel a reciprocating engine that runs a generator and produces energy. The biosolids will be pumped from the effluent pit at the end of the digester to a mechanical separator. The liquid and solids, with their pathogens and odor characteristics now greatly reduced by the digestion process, will be separated out. The solids will be used in other farm and commercial functions, such as bedding for the Farm's cows, which will allow the Farm to save on the cost of sawdust and reduce its phosphorous release. The liquid waste will be used as fertilizer, which presents less of an environmental hazard than using raw manure. Kane pf. at 3 and 6.

8. The Project's digester will primarily use cow manure produced on the Farm. KCP will also potentially utilize other agricultural substrates, such as animal waste, waste grains, pre-consumer food waste, waste dairy products (e.g., whey), waste crops, and energy crops, from both on-farm and off-farm sources. If KCP utilizes feedstock from off-farm sources, at no time will the quantity of off-farm feedstock exceed feedstock derived from the Farm. Kane pf. at 3.

9. The generator will be a Guascor Model SFGLD 180 biogas-fired generator set rated at 225 kW and produced by Martin Machinery. The host utility is CVPS. Kane pf. at 2.

Orderly Development of the Region

[30 V.S.A. § 248(b)(1)]

10. The proposed project will not unduly interfere with the orderly development of the region, with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality. This finding is supported by findings 11 through 13, below.

11. The Sheldon Planning Commission and the Northwest Regional Planning Commission ("NRPC") both endorsed the Project as consistent with the town and regional plans. Kane pf. at 4; exhs. F and G.

12. Currently, Sheldon is the location of at least one operating agricultural-methane electrical generating facility at Green Mountain Dairy. Kane pf. at 4.

13. The NRPC expressly encourages the development of local, renewable energy sources and specifically highlights support for farm-based bio-gas development. Exh. G.

Need for Present and Future Demand for Service

[30 V.S.A. § 248(b)(2)]

14. The Project has been accepted, by the Vermont SPEED Facilitator, as a SPEED resource so that KCP may sell power under the standard-offer program. KCP has an executed standard-offer contract. Kane pf. at 4-5.

Discussion

Pursuant to 30 V.S.A. § 8005(b)(8):

a demonstration of compliance with subdivision 248(b)(2) of this title, relating to establishing need for the facility, shall not be required if the facility is a SPEED resource and if no part of the facility is financed directly or indirectly through investments, other than power contracts, backed by Vermont electricity ratepayers.

Accordingly, KCP does not need to demonstrate compliance with this criterion.

System Stability and Reliability

[30 V.S.A. § 248(b)(3)]

15. The proposed project will not have an adverse impact on system stability or reliability. This finding is supported by findings 16 through 18, below.

16. CVPS performed a system impact study ("SIS") to examine potential impacts of the Project on the CVPS distribution system. The Project will be interconnected at 12.47 kV with CVPS's distribution system originating at the Sheldon 10 distribution circuit at existing Line 91 Pole 30-3. The SIS was analyzed using a generator with 350-kVA capacity at unity power factor (i.e., 350-kW output). The actual generator to be used on the Farm will be rated at 225 kW. CVPS determined that the Project, as proposed at 225 kW, would not have an adverse impact on system stability or reliability, provided that the Project follows the requirements outlined in the

SIS. Exhs. H and J; letter of February 24, 2011, from Ebenezer Punderson, Esq., on behalf of KCP, to Susan Hudson, Clerk of the Board.

17. Sections 4, 5, and 7 of the SIS identified multiple control strategies to avoid undue adverse stability and reliability problems including controls to prevent the generator from starting and stopping more than four times per hour to protect CVPS and its customers from undesirable voltage flicker; inclusion of a Direct Transfer Trip scheme to prevent potential islanding; and the inclusion of an isolation switch. Exh. H.

18. KCP will comply with the conditions set forth in the SIS and will pay for all costs of the interconnection facilities as requested by CVPS. Letter of April 12, 2011, from Ebenezer Punderson Esq., on behalf of KCP, to Susan Hudson, Clerk of the Board.

Discussion

CVPS's SIS raised concerns that the Project has the potential to negatively impact the reliability and power quality of the Area Electrical Power System.² However, CVPS determined that the Project would not adversely affect system stability or reliability, provided that the Project follows the requirements outlined in the SIS.³ KCP has agreed to comply with the conditions set forth in the SIS and pay for all costs of the interconnection facilities as requested by CVPS.⁴ Based on KCP's compliance with the SIS, we conclude that the Project will not cause undue adverse impacts on system stability and reliability. KCP must comply with the recommendations contained in the SIS and construct the Project in accordance with the plans and testimony submitted by CVPS.⁵

In addition, CVPS and KCP highlighted the need for the development of an interconnection agreement⁶ and we require that, prior to operation of the Project, KCP enter into an interconnection agreement with CVPS and file the agreement with the Board and the

2. Exh. H.

3. Exhs. H and J.

4. Letter of April 12, 2011, from Ebenezer Punderson Esq., on behalf of KCP, to Susan Hudson, Clerk of the Board.

5. KCP submitted testimony and exhibits from CVPS detailing the distribution upgrades required by the SIS. *See* Upton pf.; Upton supp. pf.; letter of April 19, 2011, from Morris Silver, Esq., on behalf of CVPS, to Susan Hudson, Clerk of the Board; exhs. E and CVPS-TOU-1-5.

6. Kane pf. at 10; exh. H at 3.

Department. In addition, we require that, prior to interconnection of the generator with the CVPS system, KCP provide the Board and the Department with written documentation that the Project meets the applicable codes and standards listed in PSB Rule 5.510.

Economic Benefit to the State

[30 V.S.A. § 248(b)(4)]

19. The Project will provide an economic benefit to the state and its residents. First, it offers a local and renewable power source, which adds diversity to the state's energy mix and displaces generation that uses fossil fuel. Second, the Project enhances the economic viability of the Farm, which in turn enhances the economic viability of ancillary services associated with farming. Third, the Project provides additional, indirect economic benefits including the reduced likelihood of the Farm taking land out of production, thus preserving the image of Vermont that is promoted to tourists. Finally, other indirect economic benefits to the general public include reduced odor from manure-spreading, improved nutrient management, and the reduction of greenhouse gases by removing methane, a significant greenhouse gas, from the atmosphere, by trapping it and burning it as fuel for the generator. Kane pf. at 4-6.

**Aesthetics, Historic Sites, Air and Water Purity,
the Natural Environment and Public Health and Safety**

[30 V.S.A. § 248(b)(5)]

20. The Project will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and public health and safety. Kane pf. at 6. This finding is also supported by findings 21 through 48, below, which are the criteria specified in 10 V.S.A. §§ 1424(a)(d) and 6086(a)(1)-(8)(a) and (9)(k).

Outstanding Resource Waters

[10 V.S.A. § 1424(a)(d)]

21. The Project will not be located on or near any outstanding resource waters. Kane pf. at 10.

Water and Air Pollution

[10 V.S.A. § 6086(a)(1)]

22. The Project will not result in undue water or air pollution. This finding is supported by findings 23 through 35, below.

23. The Project will reduce the release of methane gas and minimize odors associated with the conventional handling of raw manure. Kane pf. at 4 and 6.

24. The Project will convert raw manure into liquid waste before spreading it as fertilizer on the Farm's fields, thus reducing the potential for surface and groundwater contamination created by spreading raw manure. Kane pf. at 4 and 6.

25. The Project will produce air emissions from burning methane in the generator's engine and from flaring excess methane from the digester. The Air Pollution Control Division of the ANR reviewed the emissions data, stack, and flare specifications and, as set forth in a letter dated October 10, 2010, determined that an air pollution control permit is not required, but included four operating conditions as part of that determination. Kane pf. at 7; exh. I.

26. ANR's four operating conditions are as follows:

(1) [KCP] shall only install and operate a Guascor Model SFGLD 180 biogas-fired generator set rated at 250 kilowatts. [KCP] shall not install an alternative engine without prior written approval from [ANR]. The engine shall be maintained in good working order at all times and operated and maintained in accordance with the manufacturer's operation and maintenance recommendations.

(2) [KCP] shall design and operate the biogas-to-energy Facility in such a manner that any biogas which is not combusted in the engine is routed to a flare that is designed and operated in accordance with 40 *CFR* Part 60, Subpart A, §60.18. The flare shall also be equipped with a properly sized windscreen to prevent blowout of the flame. All elements of the flare system shall be maintained in good working order at all times and operated and maintained in accordance with the manufacturer's operation and maintenance recommendations.

(3) The flare shall be equipped and operated with an automatic ignition system, such as a spark ignition system or a continuous pilot light, to ensure immediate and continuous combustion of any biogas that is routed to it. Spark igniters may be powered by the grid or an acceptable alternative power source.

(4) [KCP] shall register its air emissions with [ANR] annually in accordance with Subchapter VII of the Vermont Air Pollution Control Regulations. . . .

Exh. I.

Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

27. The Project will not be located on or near any headwaters area. Kane pf. at 7.

Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

28. The Project will meet applicable Department of Health and Vermont Department of Environmental Conservation regulations for the disposal of wastes, and will not involve the injection of waste materials or any harmful or toxic substances into ground water or wells. This finding is supported by finding 29, below.

29. The Project will improve current waste-disposal practices. The digester is a sealed container, which will not release untreated waste. KCP does not intend to dispose of new waste and the Project will not require new toilet facilities. Kane pf. at 7.

Discussion

The Project's proposed use of off-farm feedstock raises several concerns, including compliance with state regulation and potential storage and odor issues. Currently, KCP does not anticipate the need for off-farm feedstock.⁷ However, as discussed in previous orders for agricultural-methane facilities, agricultural-methane projects that use or store off-farm feedstock likely invoke jurisdiction under both ANR's water quality regulations and the Agency of Agriculture, Food and Markets' ("AAFM") solid waste management programs.⁸ Therefore, if KCP intends to use or store off-farm feedstock for the Project, KCP must notify ANR and AAFM and obtain all necessary permits or approvals as required by ANR and AAFM.

On March 28, 2011, ANR filed comments regarding KCP's proposed use of off-farm feedstock in the digester.⁹ ANR requested that the Board include the following as a condition of any CPG issued in this docket:

7. Kane pf. at 2-3; finding 8.

8. *See Petition of Agnorth BioPower*, Docket 7572, Order of 1/6/10 at 13.

9. Letter of March 28, 2011, from Donald Einhorn, Esq., on behalf of ANR, to Susan Hudson, Clerk of the Board. The March 28 comments superseded ANR's March 17 comments.

(1) KCP be required to apply for and obtain the appropriate Solid Waste Management Certification if off-farm food waste will be utilized as feedstock for the Facility; and (2) If liquid food processing wastes from an off-farm source are utilized as feedstock, KCP shall only accept such wastes from generators that have received an Indirect Discharge Permit from the Wastewater Management Division. This condition does not apply during any periods when KCP is testing such wastes to determine suitability as a feedstock.¹⁰

On April 12, 2011, KCP filed a letter stating that it did not object to ANR's March 28 comments.¹¹ KCP's April 12 letter also asserted that concerns regarding the storing and handling of off-farm feedstock at the Farm "should be addressed within the context of the joint ANR/AAFM permitting and approval protocols for the use of off-farm feedstock, rather than as a blanket condition of the CPG itself."¹²

First, we address ANR's requested conditions. ANR has determined that KCP's potential use of off-farm feedstock invokes jurisdiction under two ANR permitting programs and KCP does not object to ANR's determination. Therefore, we conclude that it is appropriate to include in our approval ANR's requested conditions. Thus, if KCP employs off-farm food waste as feedstock, it must obtain a Solid Waste Management Certification from ANR and, if KCP employs off-farm liquid food-processing wastes, it must only accept such wastes from generators that have received an Indirect Discharge Permit from the Wastewater Management Division.

Second, we disagree with KCP's suggestions that ANR's and AAFM's "jurisdiction should cover not just quantity and type of feedstock, but on-site storage and handling as well, and [that] the CPG should simply require compliance with the ANR/AAFM permits and approvals."¹³ Although compliance with ANR's and AAFM's jurisdiction regarding on-farm storage and handling of feedstock determines whether a project complies with 10 V.S.A. § 6086(a)(1)(B), the Board must independently determine whether the project, given such

10. Letter of March 28, 2011, from Donald Einhorn, Esq., on behalf of ANR, to Susan Hudson, Clerk of the Board.

11. Letter of April 12, 2011, from Ebenezer Punderson, Esq., on behalf of KCP, to Susan Hudson, Clerk of the Board.

12. Letter of April 12, 2011, from Ebenezer Punderson, Esq., on behalf of KCP, to Susan Hudson, Clerk of the Board.

13. Letter of April 12, 2011, from Ebenezer Punderson, Esq., on behalf of KCP, to Susan Hudson, Clerk of the Board.

compliance, will have undue adverse effects on the air and water purity, the natural environment and public health and safety.¹⁴ Pursuant to Section 248(b)(5), the Board must give due consideration "to the criteria specified in 10 V.S.A. § 1424a(d) and §6086(a)(1) through (8) and (9)(K)." Therefore, we also address, within the discussion directly below and within the discussion regarding transportation,¹⁵ whether the storage and handling of off-farm feedstock on the Farm could impact the subcriteria of 10 V.S.A. § 6086.

Accordingly, we address whether KCP's use of off-farm feedstock has the potential to impact the determination that the Project will not have an undue adverse effect on water and air quality, pursuant to 10 V.S.A. § 6086(a)(1).¹⁶ KCP's April 12 letter specifically referred to a condition included in previous Board orders requiring developers that employ off-farm feedstock to "load all semi-solid off-farm feedstock into the digester hopper, and feed it into the digester tanks, on the same day as delivery, in order to eliminate the need for on-site storage and minimize potential odors,"¹⁷ and stated that same-day transfers could present problems. KCP indicated that introducing a full load of food processing feedstock into the digester could upset the chemical balance of the digester and the biological process, and that the digester may not have the capacity to accommodate a load on the day of delivery.

We understand KCP's concerns regarding same-day transfers of off-farm feedstock, but we also must recognize that the importation of off-farm feedstock could create undue odors, dust, and water quality impacts if not handled and stored appropriately on the Farm. KCP's compliance with ANR's and AAFM's regulations certainly provides some assurance that these concerns will be addressed; however, further assurances are necessary to ensure that the Project

14. 30 V.S.A. § 248(b)(5).

15. See 10 V.S.A. § 6086(a)(5).

16. Above we concluded that the Project, as built, will not create undue water or air pollution; however, if KCP intends to transport off-farm feedstock onto the Farm property, the Board must consider all relevant potential impacts of such importations, including potential water-quality and air-quality impacts.

17. *Petition of Monument Farms*, Docket 7592, CPG of 3/31/11; *Petition of Dubois Farm, Inc. and Dubois Energy, LLC*, Docket 7584, CPG of 5/13/10.

will not create undue adverse effects on air and water quality.¹⁸ The requirement that off-farm feedstock be loaded into the hopper and fed into the digester on the same day as delivery was included in previously approved agricultural-methane projects' CPGs to ensure compliance with Section 248. However, it is possible that agricultural-methane projects that wish to import feedstock may be able to ensure compliance with Section 248 by filing an appropriate storage and handling plan with the Board for approval. Such a plan should specifically address concerns regarding odor and water quality and incorporate any relevant ANR or AAFM permit or approval requirements.¹⁹ Therefore, given KCP's concerns regarding same-day transfers of off-farm feedstock and our need to ensure that the Project complies with the substantive criteria of Section 248, we will allow KCP to *either* ensure that all semi-solid feedstock is loaded into the digester hopper and fed into the digester tanks on the same day as delivery, in order to eliminate the need for on-farm storage and minimize potential odors *or*, prior to the first project-related off-farm feedstock delivery, file a storage and handling plan for off-farm feedstock with the Board for approval.

Based on the findings and KCP's compliance with the conditions discussed above, we conclude that the Project will meet applicable regulations for the disposal, handling, and storage of wastes and will not have an undue adverse impact on air and water quality.

Water Conservation

[10 V.S.A. § 6086(a)(1)(C)]

30. The Project will not require a new water supply or impact existing water use. Kane pf. at 7-8.

18. KCP did address the impact of its potential importation of off-farm feedstock on the area's transportation system by agreeing to limit importations to no more than one truck trip per day. *See* findings and discussion under 10 V.S.A. § 6086(a)(5). However, KCP did not address any other relevant impacts of the potential importation of off-farm feedstock on the surrounding area, including the impacts on any nearby residences. If KCP seeks to file a petition for amendment of this order with respect to the use, handling or storage of off-farm feedstock, KCP should provide testimony regarding how the potential importation of off-farm feedstock impacts the substantive criteria of Section 248.

19. For instance, a developer might propose storing off-farm feedstock that could emit odors or permeate soils in appropriate enclosed containers.

Floodways

[10 V.S.A. §§ 6086(a)(1)(D)]

31. The Project is not located within a floodway. Kane pf. at 8.

Streams

[10 V.S.A. §§ 6086(a)(1)(E)]

32. The Project will have no impact on streams, since no improvements will be located on the banks of a stream. Kane pf. at 8.

Shorelines

[10 V.S.A. §§ 6086(a)(1)(F)]

33. The Project will not be located on or near a shoreline. The Missisquoi River is located across Route 105 from the Farm and adjacent to land owned by the Farm; however, the top bank of the Missisquoi River is 1,125 feet from the closest part of the Project. Kane pf. at 8; letter of February 24, 2011, from Ebenezer Punderson, Esq., on behalf of KCP, to Susan Hudson, Clerk of the Board.

Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

34. The Project will not impact wetlands. None of the Project operations will occur on or near any wetlands on the Farm property. Kane pf. at 8.

Sufficiency of Water and Burden on Existing Water Supply

[10 V.S.A. §§ 6086(a)(2)and(3)]

35. The Project will not require the use of additional water. Kane pf. at 8.

Soil Erosion

[10 V.S.A. § 6086(a)(4)]

36. The Project will not have any meaningful impact with regard to soil erosion. The sitework for the Project will be located entirely within the farmstead, in a relatively flat area, and the existing topography will be minimally altered. Kane pf. at 8.

Transportation Systems

[10 V.S.A. § 6086(a)(5)]

37. The proposed project will not cause unreasonable congestion or unsafe conditions with respect to use of highways, waterways, railways, airports and airways, and other means of transportation existing or proposed. Kane pf. at 9. This finding is supported by findings 38 and 39, below.

38. The Project's digester will primarily use cow manure produced on the Farm. KCP will also potentially utilize other agricultural substrates, such as animal waste, waste grains, pre-consumer food waste, waste dairy products (e.g., whey), waste crops, and energy crops, from both on-farm and off-farm sources. If KCP utilizes feedstock from off-farm sources, at no time will the quantity of off-farm feedstock exceed feedstock derived from the Farm. Kane pf. at 3.

39. The Project will be located on Route 105 and any additional truck traffic related to the use of off-farm materials will be negligible. Kane pf. at 9.

Discussion

KCP indicated that it was unable to predict how many truck trips would be generated if it needed to utilize off-farm feedstock.²⁰ However, KCP is amenable to a limit on the number of off-farm feedstock truckloads per day.²¹ Accordingly, the Board limits KCP's importation of off-farm feedstock to one truckload per day.

20. Kane pf. at 9.

21. Kane pf. at 9.

Educational Services

[10 V.S.A. §§ 6086(a)(6)]

40. The Project will not cause an unreasonable burden on educational services. KCP hopes to make the Project available to local schools as an educational resource. Kane pf. at 9.

Municipal Services

[10 V.S.A. §§ 6086(a)(7)]

41. The Project will not require any municipal or governmental services. Kane pf. at 9.

**Aesthetics, Historic Sites
and Rare and Irreplaceable Natural Areas**

[10 V.S.A. § 6086(a)(8)]

42. The Project will not have an undue adverse impact on the scenic or natural beauty, aesthetics, historic sites, or rare and irreplaceable natural areas. Kane pf. at 9. This finding is also supported by findings 43 through 46, below.

43. The Project is designed to be consistent in appearance with existing structures and will be constructed on the Farm property, within the existing farmstead complex and near other large farm buildings. The associated distribution upgrades associated with the Project, will be installed within the farmstead complex and off-farm within CVPS's existing distribution right-of-ways. Kane pf. at 3 and 9; *see* Upton pf; Upton supp. pf.

44. The on-farm distribution upgrades will not have an adverse aesthetic impact because the upgrades will merely upgrade and extend an existing line towards the farmstead complex, which is a collection of large barns and outbuildings. Kane pf. at 7; Upton pf. at 3.

45. The off-farm distribution upgrades will not be out-of-character when compared to other equipment found around the region and state, and will be viewed within the context of the existing distribution line. Upton pf. at 6.

46. There are no historic sites or rare and irreplaceable natural areas in the vicinity of the proposed project. Kane pf. at 9.

Necessary Wildlife Habitat and Endangered Species

[10 V.S.A. § 6086(a)(8)(A)]

47. The Project will not have any adverse impacts on wildlife habitats or threatened or endangered species. Kane pf. at 9-10.

Development Affecting Public Investments

[10 V.S.A. § 6086(a)(9)(K)]

48. The Project will not unnecessarily or unreasonably endanger any public or quasi-public investment or materially jeopardize or interfere with the public's use or enjoyment of or access to public lands or services. The only public investment near the Project is Route 105, the road from which the Farm is accessed. The Project will not adversely affect the use of this road by the public. Kane pf. at 10; exh. E.

Least-Cost Integrated Resource Plan

[30 V.S.A. § 248(b)(6)]

49. KCP does not distribute or transmit electricity to the public and is not required to prepare an integrated resource plan pursuant to 30 V.S.A. § 218c. Kane pf. at 10.

Compliance with Electric Energy Plan

[30 V.S.A. § 248(b)(7)]

50. The Project is consistent with the *Vermont Electric Plan* because it fulfills the need for electric service that is "carefully balanced" between the following goals: "efficient, adequate, reliable, secure, sustainable, affordable, safe and environmentally sound, while encouraging the state's economic vitality and maintaining consistency with other state policies." Kane pf. at 10.

51. On March 17, 2011, the Department filed a letter stating that the Project is consistent with the *Vermont Electric Plan*, pursuant to 30 V.S.A. § 202(f). Letter of March 17, 2011, from Louise C. Porter, Esq., to Susan Hudson, Clerk of the Board.

Outstanding Resource Waters

[30 V.S.A. § 248(b)(8)]

52. The Project is not located near any outstanding resource waters. Kane pf. at 10.

Existing or Planned Transmission Facilities

[30 V.S.A. § 248(b)(10)]

53. The Project, with the development of an appropriate interconnection agreement, can be served economically by existing or planned transmission facilities without undue adverse impact on Vermont utilities or customers. Kane pf. at 10.

IV. CONCLUSION

Based upon all of the above evidence, we conclude that the Project will be of limited size and scope; the petition does not raise a significant issue with respect to the substantive criteria of 30 V.S.A. § 248; the public interest is satisfied by the procedures authorized in 30 V.S.A. § 248(j); and the Project will promote the general good of the state.

V. ORDER

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board ("Board") of the State of Vermont that:

1. The proposed project of Kane's Cow Power, LLC ("KCP") to install and operate a 225-kW agricultural-methane electrical generating facility at the Kane Scenic River Farm, located at 5893 Route 105 in Sheldon, Vermont (the "Project"), will promote the general good of the State of Vermont in accordance with 30 V.S.A. § 248, and a certificate of public good to that effect shall be issued in this matter.

2. The Project shall be constructed in accordance with the evidence and plans submitted in these proceedings. Any material deviation from these plans must be approved by the Board.

3. Prior to proceeding with construction, KCP shall obtain all necessary permits and approvals. Construction, operation, and maintenance of the proposed Project shall be in accordance with such permits and approvals, and with all other applicable regulations, including

those of the Vermont Agency of Natural Resources ("ANR") and the U.S. Army Corps of Engineers.

4. KCP shall comply with the recommendations contained in the System Impact Study ("SIS") to assure that the Project does not cause undue adverse impacts on system stability and reliability. KCP shall pay for all costs associated with the recommendations in the SIS as well as all interconnection costs.

5. Prior to operation of the Project, KCP shall enter into an interconnection agreement with Central Vermont Public Service Corporation ("CVPS") and file the agreement with the Board and the Department of Public Service ("Department").

6. Prior to interconnection of the generator with the CVPS system, KCP shall provide the Board and the Department with written documentation that the Project meets the applicable codes and standards listed in PSB Rule 5.510.

7. KCP shall comply with the four conditions for operating the engine and the flare established by ANR's Air Pollution Control Division in a letter dated October 10, 2010.

8. If KCP intends to employ or store off-farm feedstock for the Project, KCP shall: (a) ensure that at all times, the amount of on-farm feedstock exceeds the off-farm feedstock used in the digester; (b) ensure that at least fifty-one percent of feedstock shall be derived from agricultural operations; (c) notify ANR and Agency of Agriculture, Food and Markets ("AAFM") and obtain all necessary permits or approvals as required by ANR and AAFM; (d) except for testing purposes, if using off-farm food waste, obtain a Solid Waste Management Certification from ANR's Waste Management Division; (e) except for testing purposes, if using off-farm liquid food-processing wastes, only accept such wastes from generators that have received an Indirect Discharge Permit from ANR's Wastewater Management Division; and (f) either ensure that all semi-solid feedstock is loaded into the digester hopper and fed into the digester tanks on the same day as delivery or, prior to the first project-related off-farm feedstock delivery, file a storage and handling plan for off-farm feedstock with the Board for approval.

9. KCP shall not import more than one truckload per day of off-site agricultural substrate.

DATED at Montpelier, Vermont, this 12th day of May, 2011.

<u>s/ James Volz</u>)	
)	PUBLIC SERVICE
)	
<u>s/ David C. Coen</u>)	BOARD
)	
)	OF VERMONT
<u>s/ John D. Burke</u>)	

OFFICE OF THE CLERK

FILED: May 12, 2011

ATTEST: s/ Susan M. Hudson
Clerk of the Board

NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@state.vt.us)

Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.